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THE COMMONWEALTH OF MASSACHUSETTS

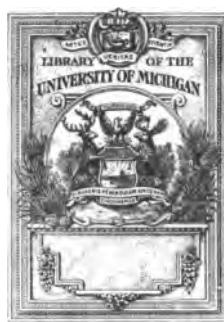
DEPARTMENT OF ANIMAL INDUSTRY

SECOND ANNUAL REPORT

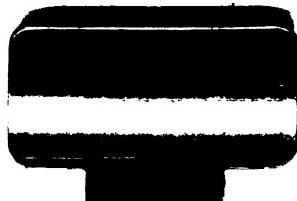
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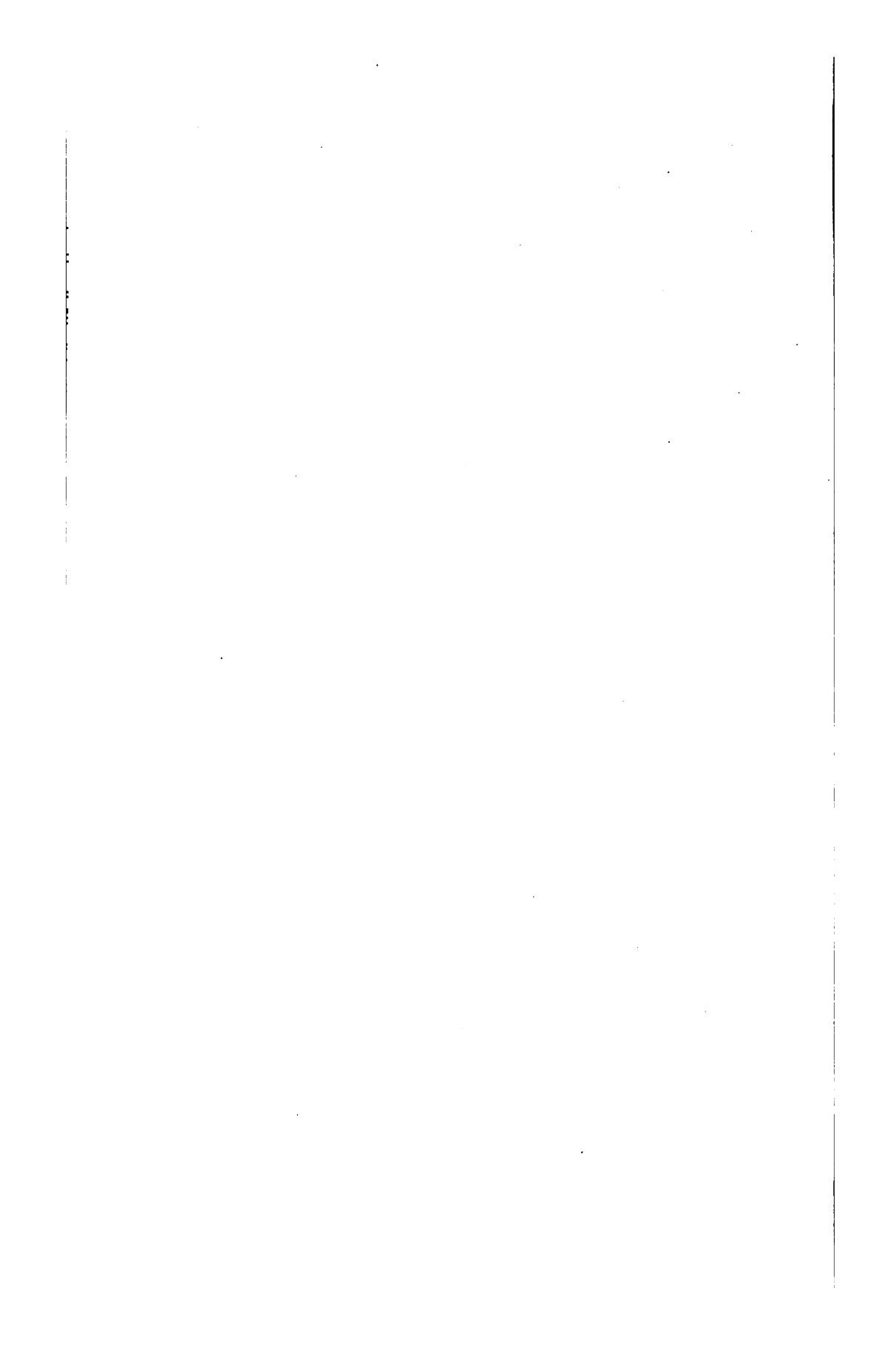
NOVEMBER 30, 1913



**PRESENTED BY
THE AUTHOR**



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Massachusetts Dept. of animal industry.

Public Document

No. 98

SECOND ANNUAL REPORT

OF THE

COMMISSIONER OF ANIMAL INDUSTRY.

1913.

FOR THE YEAR ENDING NOVEMBER 30, 1913.



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The Commonwealth of Massachusetts.

DEPARTMENT OF ANIMAL INDUSTRY,
BOSTON, Jan. 10, 1914.

To the Honorable Senate and House of Representatives : —

In accordance with the provisions of section 4, chapter 608, Acts of 1912, which act is entitled, "An Act to abolish the Cattle Bureau of the State Board of Agriculture, and to create a Department of Animal Industry," I have the honor to present to the General Court the second annual report of the work accomplished by this department for the fiscal year ending Nov. 30, 1913.

The Department of Animal Industry is eighteen months old. During the first third of its existence, while it was being adjusted to the new conditions and enlarged responsibilities, its work was to a considerable degree tentative and experimental. But the period covered by this report marks a full year of systematized activity under rules suggested by experience and tested in the crucible of practice. It has been a year of distinct achievement and of progress, and I am very proud of what has been and is being accomplished.

I recognize and desire to acknowledge the hearty co-operation of both office and field staffs, whose faithful service has contributed materially to the results attained. With their co-operation the department, as was anticipated, has demonstrated that it is a protector not only of the cattle interests of the State, but of the health of its residents as well. The employees are winning the confidence of the live-stock owners of the State, — a condition that leads to a better control of contagious diseases among animals, and of the sanitary improvements of buildings in which they are housed.

The equipment necessary to carry on the work of this department is much in excess of that required by its predecessor, the Cattle Bureau, and in extending the work in accordance with the provisions of recently enacted laws I feel that I have been

fortunate in securing the assistance of men specially fitted for this work, — men who, with the former employees of the Cattle Bureau, constitute a group of officials second to none engaged in a similar capacity in any State in the Union.

The department has had and is having the loyal support of the veterinary profession of the State. I have been pleased and encouraged by the unvarying and continued indorsement of my efforts by members of that profession who might naturally look askance at the ideas and policy of a layman. To the best of my knowledge there is not a veterinarian of importance in the State who does not stand ready to render the department the assistance of his best efforts at all times.

In addition I deem it proper to acknowledge the promptness shown by those societies which are charged with promoting the comfort of dumb animals, and the importance of whose untiring work is universally conceded, in reporting to this department all suspicious cases of contagious animal diseases falling within their observation. And last but not least, and in fact best of all, I am cheered by the spirit of growing confidence and willing co-operation shown by live-stock owners throughout the State.

My excuse for occupying so much space with acknowledgments for services rendered is that I may place on record the friendly feeling existing between the department and that portion of the public whose property falls within the department's jurisdiction, with the conservation of which property this department by statute law is charged. To foster this co-operative spirit is the aim of the department. Without it, it is helpless; with it, the highest results are possible of achievement.

The work of the department comprises the control of contagious diseases among animals, especially cattle and horses, the regulation and installation of sanitary conditions in farm buildings in which horses and neat cattle are housed, and the prevention of the importation of animals from infected areas outside the State. The reimbursement plan of the State for owners of animals killed because of being affected with glanders or tuberculosis would be a temptation to the bringing of infected animals across the State line were it not for the restrictive power of this department in the matter of importation.

I am confident the system in vogue in this State for the control of tuberculosis in cattle is the most satisfactory of any now in use in this country. I have recently been informed by the managers of two leading slaughtering establishments in this State that they prefer their buyers should purchase Massachusetts cattle rather than any other, except range-fed stock, because the percentage of loss after slaughtering is less among Massachusetts cattle than is it among those from any near-by State.

A quarantine has recently been established against those States most heavily infected with glanders, which prevents the importation of horses except under the department's permit. After arrival in this State the horses are subjected to the department's examination. The recently enacted law, placing the control of the disease of glanders in the city of Boston in charge of this department, has proved a wise step, and the results have been more encouraging than the most enthusiastic advocate of the plan ever claimed for it, and will result eventually in materially restricting the spread of the disease in other sections of the State.

The past three years have marked a steady growth and expansion in the work of the department. It has grown from a department tributary to the State Board of Agriculture, performing only the positively necessary duties in the matter of control work under limited and inadequate laws and an appropriation far short of its needs, to a distinctive organization responsible directly to the Legislature; a vigorous, healthy department established squarely on an independent basis, directly and unqualifiedly charged with functions of vastly increased importance. It has grown to be a department based on remedial legislative acts, and supported by an appropriation commensurate with the demands of that legislation. Under these conditions I have been enabled to gather into the department family a corps of intelligent and loyal coworkers that in faithful and satisfactory service rivals that of any department of the State's official service.

My faith in the ultimate success of the policy under which the Department of Animal Industry is being conducted has never faltered. If co-operation between the State and the individual owner of domestic animals is fostered, if the policies

of "live and let live" and of education are maintained, this department will become a blessing and a powerful contributor to the material prosperity of the State.

LEGISLATION RECOMMENDED.

There does not appear to be any legal authority for the employment of more than one clerk in the Department of Animal Industry, a ridiculously inadequate provision when the scope and amount of the work imperatively demanding attention is considered. I shall ask that section 3, chapter 608, Acts of 1912, be amended so as to provide for the employment of such clerks, stenographers and other office assistants as the work of the department may require.

I shall also ask that the naming of local inspectors of animals be delegated to the commissioner of this department. The efficiency of the administration of the department absolutely depends upon the efficiency of its subordinates. The local inspectors are now named by local authorities, subject, to be sure, to the approval of the head of this department, but this frequently forces upon him the settlement of questions that are often more political than departmental. Such settlement is productive of delay and friction that militate against the attainment of co-ordinated work and the highest efficiency. These local inspectors are, to be sure, paid in part, and in some cases wholly, by the city or town they represent, but they are responsible only to this department and work under its direction. Their allegiance to its rules, which are based upon the laws of the Commonwealth, must be at all times fully assured. If their selection and appointment were vested in the head of this department, direct responsibility and centralized authority would be strengthened, local friction obviated and better results would be possible.

SUGGESTIONS RATHER THAN RECOMMENDATIONS.

There are two matters that have developed in the course of prosecution of the department work which need adjustment. While not recommending any specific legislation to correct these matters, I shall be ready to assist in any such legislation that your honorable body may propose. From my standpoint they are of vital importance, and demand careful consideration.

The first relates to compensation for glandered horses condemned by the State. Some change is necessary. The present rate of compensation in such cases is, in my opinion, inadequate if the eradication of the disease is to be accomplished, and that, I assume, is the aim of the State. The low rate of compensation we are allowed to make for horses condemned only serves to arouse and inflame the combative spirit of the owner, who feels he cannot afford this imposed loss. Such spirit is but natural. It is certainly obstructive and a hindrance. Under the present law, which establishes \$50 as the maximum sum to be paid for a condemned glandered horse, the department can only hope at best to control the disease; it cannot eradicate it.

The disease of glanders is a serious menace, too often ignored, and frequently difficult to diagnose. It has assumed startling proportions in the State during the last ten years. It must be fought with heroic measures. Since June, 1912, the city of Boston, where a large percentage of the cases of glanders in the State exists, has been under State jurisdiction. This department is grappling with this menace, calling to its assistance the highest veterinary authority, and employing the latest methods of diagnosis, but the department is faced constantly with the inadequate rates of compensation for property that should be confiscated and destroyed if the disease is to be stamped out. With an increase in compensation rates, approaching more nearly to what is equitable, I am sure a better understanding and a greater degree of co-operation between the State and the horse owner will be possible and probable, and a decided advance made towards the much-desired eradication of this dread disease.

The other matter demanding adjustment is an existing conflict of supervisory authority between the State Board of Health and this department, in the inspection of farm buildings in which neat cattle are housed. By the provisions of chapter 381, Acts of 1911, the Cattle Bureau — all the powers of which were one year later vested in this department — was given the authority to inspect the sanitary conditions of farm buildings, in addition to the inspection of the cattle housed therein, and was clothed with power to enforce such changes as were deemed necessary by the head of the department.

This legislation was urged in the interest of intelligent and

practical classification of work, and because the representatives of this department who visited the farm buildings in order to inspect the herds of the State were best able to judge of the sanitary conditions of the buildings in which the cattle were housed, and further, because their information so obtained was first-hand and reliable.

Prior to the passage of this act of 1911 this department, or rather its predecessor the Cattle Bureau, upon receipt of the report of its inspectors referred unsanitary building conditions to the State Board of Health, which claimed supervision of such buildings under an old general law for the protection of food supply. Under the old régime the remedial work was frequently much delayed, and the farmer and cattle owner were subjected to the annoyance of a double inspection. This department felt its efforts to protect the herds of the State from infection were rendered nugatory if the farm buildings, unsanitary in condition, often reeking with filth and disease-breeding germs, were not cleaned at the same time that the herds were rid of infected animals.

The Legislature sustained the position taken by this department and placed upon the statute book the act of 1911 referred to above. In spite of the specific authority delegated to this department by this act, the State Board of Health continues to exercise at intervals its old-time supervision. There is no need of this dual supervision of farm buildings. Under the rigid rules laid down by this department a complete record of barn conditions throughout the State is kept. Our trained inspectors scattered all over the State are in close touch with conditions. Great improvement in farm building conditions is everywhere apparent, and the cattle owner is being educated to the fact that a clean, sanitary barn means clean cattle, saves trouble and shows increased financial results.

If the act of 1911 meant anything, it meant to place farm building inspection solely with this department. If there is ambiguity in its phrases, it should be amended, so that he who runs may read. I leave the matter with your honorable body for consideration.

Appended will be found tabulated data of the work of the department for the year.

RABIES.

The following table shows the extent of rabies during the year ending Nov. 30, 1913:—

	Dogs.	Cattle.	Cats.	Horses.	Goats.	Pigs.
Killed or died with rabies, . . .	205	11	4	2	1	1
Killed by owners or died in quarantine, not rabid.	121	5	6	—	—	1
Released from quarantine, . . .	146	5	1	2	1	1
Animals still in quarantine, . . .	19	1	—	—	—	—
Totals,	491	22	11	4	2	3
Grand total,	533 animals.					

In addition, one squirrel and two hens suspected of being affected with the disease were killed by owners or died, and found not rabid.

During the year Dr. Langdon Frothingham has examined the brains of 71 dogs, 6 cats, 1 cow, 1 goat and 1 squirrel, of which 54 dogs, 4 cats and 1 goat proved to be positive cases of rabies, and 17 dogs, 2 cats, 1 squirrel and 1 cow proved to be negative. The heads of 2 dogs and 1 cat suspected of being rabid were sent in for microscopical examination, which were in such bad condition that no diagnosis could be made.

The increased prevalence of this disease during the past year strongly emphasizes the importance of careful observation of their animals on the part of dog owners. The early recognition of unusual actions or appearances of animals, their strict confinement if suspicious, and prompt report to proper authorities are measures destined to either absolutely prevent outbreaks of this disease, or at least reduce to a minimum the number of animals affected. In this way the lives of many valuable animals would be saved, and there would be much less physical and mental suffering endured by people bitten by rabid animals.

The records show that no less than 62 persons were bitten by rabid animals during the year, or so exposed by handling the same that it was deemed advisable to recommend the Pasteur treatment.

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GLANDERS.

Perhaps the most serious problem that confronts this department at present is the control of glanders. Under recently enacted law and with increased authority, this department during the past year has conducted a more vigorous campaign against this disease than has ever previously been undertaken; with the result that many hitherto obscure cases have been located and destroyed, thereby tending to continually reduce the prevalence of the disease.

Sixteen hundred and thirty horses and mules have been reported as suspected of having glanders or farcy, including those dealt with in stable tests. Of these, 1,093 were killed or died, and were found to be affected with this disease; 499 were released after examination, and 38 were held for further observation. Of the 41 cases held over from last year, 13 were killed or died, 20 were released as free from disease, and 8 are still held under observation, making a total of 1,106 cases of glanders during the year. Of this number, 576 were reported from the city of Boston.

The department is continuing the use of all the recognized methods for the diagnosis of this disease, notably, the "complement-fixation" test, mallein subcutaneously in some cases, and recently the ophthalmo-mallein test, material for which is being furnished the department by the United States Bureau of Animal Industry. This test is proving a very important addition to our methods, as a corroborative test easy of application, and if a study of results obtained confirms the opinion of the government authorities as to its correctness, its use will probably be continued to a greater extent.

The effectiveness of our work has been increased to some extent by the passage of the so-called "compensation law," providing for payment for horses ordered killed by the department because diseased with glanders. I have earlier in this report advised the amending of this law in the interest of a more effective and speedy control of the disease.

As a means to further eliminate the contagion it has become necessary to order the closing of public drinking troughs in several cities and towns, the principal of which is the city of Boston. On Nov. 1, 1913, 49 troughs in the streets of that

city were closed. At all such watering stations the public works department of the city of Boston has provided taps, from which water may be drawn, thus enabling a team driver to obtain a supply for his animal if he provides his own receptacle for it. The result is that almost every team is now equipped with a pail for this purpose, and one serious factor in the spread of the disease is eliminated.

The statistics in connection with the complement-fixation test are as follows:—

During the year, 1,195 samples of blood have been taken from 864 horses. Of this number, 430 horses were killed, 16 died, 386 were released, and 32 were held over for further test.

The reports of rendering companies, as required by section 111 of chapter 75 of the Revised Laws, as amended by chapter 243 of the Acts of 1907, continue to be of much value in furnishing information of cases of glanders or farcy, which would not otherwise be brought to the attention of the department, as the following table illustrates:—

Reports of Rendering Companies.

RENDERING COMPANIES.	Number of Reports.	Number of Cases.	Number not previously reported.
C. S. Bard, Haverhill,	2	5	-
William S. Higgins, Saugus,	14	14	-
Home Soap Company, Millbury,	6	8	-
Lowell Rendering Company,	4	6	-
James E. McGovern, Andover,	8	9	2
Muller Brothers, Cambridge,	49	192	5
William H. Nankervis, Marlborough,	2	2	-
New Bedford Extractor Company,	12	16	2
New England Rendering Company, Brighton,	34	114	40
Parmenter & Polsey Fertilizer Company, Peabody,	7	8	-
N. Roy, Jr., Fall River,	21	33	4
Sherborn Rendering Company,	3	7	1
N. Ward Company, South Boston,	53	564	20
Whitman & Pratt Rendering Company, North Chelmsford,	14	16	-
S. Winter Company, Brockton,	12	15	-
Worcester Rendering Company,	4	6	1
Totals,	248	1,015	75

On October 29 the following order relating to this branch of the work was approved by the Governor and Council and issued by the department, but as it was not fully promulgated until toward the end of the fiscal year, all statistics in connection with the execution of the order will necessarily be included in the next annual report: —

ORDER No. 8.

THE COMMONWEALTH OF MASSACHUSETTS,
DEPARTMENT OF ANIMAL INDUSTRY,
STATE HOUSE, BOSTON, Oct. 29, 1913.

To Transportation Companies, Inspectors of Animals, and All Persons whom it may concern: —

Whereas the disease known as glanders or farcy, which is a contagious disease and is so recognized under the laws of this Commonwealth, prevails extensively among horses, asses and mules in the States of New York, Connecticut and Rhode Island; and whereas such localities are, in the opinion of the Commissioner of Animal Industry, infected districts; and whereas it has become necessary to adopt measures to prevent the further spread of said contagious disease,

Now, therefore, acting under and by virtue of the authority vested in me by the provisions of chapter 90 of the Revised Laws and chapter 608 of the Acts of 1912, and all acts in amendment thereof and addition thereto, and all other authority me hereto enabling, I do hereby make the following order and regulation: —

SECTION 1. All horses, asses or mules brought within the limits of this Commonwealth from the States of New York, Connecticut or Rhode Island, must be accompanied by a permit issued by the Commissioner of Animal Industry.

SECTION 2. If, for any cause, any such horses, asses or mules are received within the limits of this Commonwealth, not accompanied by a permit, as provided in section 1 hereof, you will immediately notify this office, giving the place where said animals were received for shipment, the name of the consignee, and destination of said animals. You will not remove said animals or permit them to be removed from the car or vehicle in which they are contained without permission from the Commissioner of Animal Industry, or one of his agents, except that if, by reason of the crowded condition of the car, or because of the long confinement of said animals within the same, or for accident or otherwise, it is deemed expedient by you or your agent to unbad the same, such animal or animals may be removed by you from said car or vehicle without permission, but in such case you will notify this office, and you will not allow said animal or animals to go out of the possession of your agent or off from your premises where said animals are unloaded except upon obtaining such permission.

SECTION 3. Any person importing or bringing into this Commonwealth any horses, asses or mules from the States of New York, Connecticut or Rhode Island shall immediately upon the arrival of the same notify the local inspector of animals, and shall report in writing to the Department of Animal Industry, giving the number of animals thus brought in, the place where they were procured, the point of arrival, and the destination within this Commonwealth.

SECTION 4. All such horses, asses or mules described in section 1 hereof must undergo a physical examination or such other tests as the Commissioner of Animal Industry or his agent may deem necessary; such examination or tests must be made by agents of the Department of Animal Industry and will be made without charge to citizens of Massachusetts, and at cost for other persons.

All horses, asses or mules described in section 1 hereof, brought for delivery within the limits of the Commonwealth, are hereby ordered quarantined upon the premises and at the expense and risk of the owner or consignee until released by order of the Commissioner of Animal Industry.

Animals believed to be diseased will be killed.

Nothing in this order shall be construed to forbid the transportation by rail of horses, asses or mules through the Commonwealth to points without its borders, or the free passage of horses, asses or mules in the performance of their regular work.

SECTION 5. This order shall be published by furnishing copies to transportation companies doing business within the Commonwealth, by sending a copy to each inspector of animals in the Commonwealth, and by general distribution among dealers in horses, asses or mules, and, when deemed necessary, by furnishing copies to applicants for permits to be issued in accordance with the provisions as stated above.

FRED FREELAND WALKER,
Commissioner of Animal Industry.

Approved in Council, October 29, 1913.

EDWARD F. HAMLIN,
Executive Secretary.

ANNUAL INSPECTION OF NEAT CATTLE, FARM ANIMALS, AND PREMISES UPON WHICH THE FORMER ARE KEPT.

I wish to commend the growing interest taken in this work by local inspectors of animals. The meetings held annually by the head of this department with the inspectors have resulted in much good. The men now work on a more uniform basis, and the work done by them is of a much higher order than formerly. I have earlier in this report referred to the advis-

ability of the appointment of these officials being placed in the hands of the authority to which they are responsible, in the interest of efficiency.

In January a copy of the following circular letter was sent to each inspector of animals in the cities and towns of the State, together with blank books in which to record the results of their work:—

THE COMMONWEALTH OF MASSACHUSETTS,
OFFICE OF DEPARTMENT OF ANIMAL INDUSTRY,
STATE HOUSE, BOSTON, Jan. 15, 1913.

DIRECTIONS TO INSPECTORS OF ANIMALS.

In accordance with section 17, chapter 90 of the Revised Laws, inspectors of animals are hereby directed to make a general inspection of all neat cattle, sheep, swine and goats found within the limits of their several cities and towns, such inspection to commence February 1, and to be completed on or before the fifteenth day of March, 1913.

If upon examination the inspectors find such animals to be free from contagious disease, they will give the owner or person in charge thereof a certificate of health, as provided for in section 18 of chapter 90 of the Revised Laws, this certificate being taken from the book of blanks (Form No. 2) furnished for that purpose; but if an inspector has reason to suspect the presence of any contagious disease among any species of domestic animals, he is to quarantine such animal or animals and send duplicate copy of such quarantine to the Commissioner of Animal Industry.

Contagious diseases under the provisions of section 28 of chapter 90 of the Revised Laws include glanders, farcy, mange, contagious pleuro-pneumonia, tuberculosis, Texas fever, foot-and-mouth disease, rinderpest, hog cholera, rabies, anthrax or anthracoid diseases, sheep scab and actinomycosis.

Inspectors of animals are hereby directed to inform owners of premises when in their opinion conditions are not up to the requirements, and to give instruction to have the same changed or improved.

Books will be forwarded (Form No. 1) for carrying out the provisions of sections 17 and 24 of chapter 90 of the Revised Laws. Ten questions may be answered by checking the word "Yes" or "No"; that is, if the answer to the question is "Yes" a check mark or cross is to be made on or through the word "Yes." Four questions may be answered by checking the proper word in the question; that is, question No. 9 reads: "Is stable clean, unclean, or filthy?" — if stable is clean, the word "clean" is to be checked or crossed, if stable is unclean the word "unclean" is to be checked or crossed, etc. Two questions, Nos. 10 and 16, require the answers to be written out in full; these refer to the disposal of manure and to the nature of improvements made in either the buildings or surroundings during the past year.

It is sincerely hoped that the inspection this spring will be a thorough one, and it is requested that the answers to the questions be carefully made.

The books necessary for this inspection will be forwarded at once. Form No. 1 is to be returned to this office by *prepaid* express as soon as inspection is completed. Form No. 2 is *not* to be returned.

FRED F. WALKER,
Commissioner.

The following table embodies a condensed report of the doings of the inspectors of animals in making the annual inspection, which complies with the requirements of section 24, chapter 90, Revised Laws. For comparison, the corresponding figures for 1912 are also given:—

Net Results of Annual Inspection of Animals and Farm Premises.

	1912.	1913.
Number herds inspected,	31,070	30,655
Number neat cattle inspected,	233,348	224,951
Number cows inspected,	186,510	158,116
Number herds kept clean and in good condition,	26,374	27,227
Number sheep inspected,	25,236	24,847
Number swine inspected,	98,836	71,114
Number goats inspected,	1,316	1,249
Number stables inspected,	32,869	32,055
Number stables well located,	29,733	29,472
Number stables well drained,	30,328	30,776
Number stables well ventilated,	29,504	30,112
Number stables well lighted,	26,865	28,128
Number stables kept clean,	25,188	26,549
Number stables with good water supply,	27,707	31,683
Number stables improved since last inspection,	2,068	3,370

TUBERCULOSIS.

The most important work of local inspectors is directed toward the discovery of tuberculosis in cattle and the correction of the sanitary conditions of the stables in which they are kept.

The war against tuberculosis in cattle is still conducted, in a general way, as described in earlier reports on this disease. It includes the examination and report by the local inspectors,

the taking up of the cases reported as suspicious by an agent of the department, who finally disposes of the same, and the tuberculin testing of all cattle received from without the State.

This latter work is being done by approved veterinarians in the States from which the cattle come, or by agents of this department, either at the quarantine station or at the various receiving points throughout the State. The following figures show the number of cattle so tested and the results obtained:—

Cattle Tuberculin Tested.

Cattle tested at the quarantine station at Brighton,	18,143
Cattle tested by veterinarians outside of the State,	2,286
Cattle tested by agents of the department at points other than the quarantine station,	4,006
	—————
	24,435

Disposition of Above Cattle.

Cattle condemned on Brighton test,	367
Cattle killed on "permit to kill," tested at Brighton,	74
Cattle released from Brighton,	17,702
Cattle condemned, tested at other points than Brighton,	115
Awaiting retest,	1
Released for slaughter, subject to inspection,	6
Released on satisfactory test,	6,170
	—————
	24,435

The above table shows a substantial increase in the number of cattle received from many of the near-by States, indicating a healthy gain in the cattle industry. Particularly is this true in relation to the number of milch cows tested at Brighton, the gain in such cattle being 4,444.

The testing of the cattle at Brighton is still supervised by Agent Frank C. Field, and the general satisfaction on the part of shippers with the work of his able corps of assistants, together with the uniformly excellent results attained under his management, as proven by the rarity with which an animal released from the quarantine station is found later to be tuberculous, establishes further proof of the fitness of this agent for this important position.

The following figures show the number of neat cattle quarantined by local inspectors, the number for which warrants were issued, and the disposition made of the animals:—

Total number of cattle quarantined or reported for examination during the year, 2,729

Massachusetts Cattle.

Number released,	462
Number condemned, killed and paid for,	1,207
Number condemned and killed, in process of settlement,	138
Number permit to kill, paid for,	141
Number permit to kill, no award,	263
Number died in quarantine, no award,	52
	—
	2,263

Cattle from without the State.

Number released,	7
Number died in quarantine,	1
Number condemned and killed, no award,	446
Number condemned and killed, no lesions found, paid for,	12
	—
	466
Total,	—
	2,729

Of the above 466 interstate cattle, 353 were tested at Brighton; no lesions were found in 2, for which the State has reimbursed the owners. Of the remaining 113 cattle (which were tested at other points than Brighton) 10 were found to show no lesions, for which the State has reimbursed the owners, 7 were released on retest, and 1 died before killing order could be executed.

In addition to the 2,729 head of cattle disposed of as above, 184 cattle and 32 swine have been reported by butchers, renderers and boards of health as having been found tuberculous at the time of slaughter, all of which were rendered.

The following statistics in connection with the maintenance of a quarantine against other States to prevent the introduction of tuberculous cattle from outside sources into Massachusetts show the number and kind of animals brought in from without the State to the several quarantine stations, the quarantine, however, being against neat cattle only:—

Receipts of Stock at the Watertown Stock Yards, from Dec. 1, 1912, to Nov. 30, 1913.

New Hampshire cattle,	10,349
Vermont cattle,	6,312
Massachusetts cattle,	4,194
Sheep,	4,227
Calves,	29,502
Swine,	5,464

Receipts of Stock at the New England Dressed Meat and Wool Company's Yards at Somerville, from Dec. 1, 1912, to Nov. 30, 1913.

Maine cattle,	979
New Hampshire cattle,	864
Vermont cattle,	9,267
Western cattle,	20,277
Canada cattle,	1,880
Sheep,	490,018
Calves,	49,729
Swine,	1,102,500

Receipts of Stock at Brighton, from Dec. 1, 1912, to Nov. 30, 1913.

Maine cattle,	11,742
New Hampshire cattle,	2,567
Vermont cattle,	3,917
Massachusetts cattle,	15,301
New York cattle,	26,824
Western cattle,	12,162
Canada cattle,	3,807
Sheep,	13,500
Calves,	49,350
Swine,	52,299

The cattle upon which a tuberculin test is required are mostly milch cows to be offered for sale at the Brighton market Wednesdays, besides a few bulls and working oxen. Those animals that come to Watertown or Somerville are taken to Brighton, and all of the testing is done at the stock barn there.

During the year the following order No. 7 was issued, printed on large placards and posted on the quarantine grounds. The purpose of this order, similar to one which has been issued in previous years, was to prevent the spread of contagion from any cattle which might be brought from districts infected with Texas fever during the summer months.

ORDER NO. 7.

THE COMMONWEALTH OF MASSACHUSETTS,
 DEPARTMENT OF ANIMAL INDUSTRY,
 STATE HOUSE, BOSTON, JUNE 3, 1913.

To All Persons whom it may concern: —

Whereas the disease known as Texas fever, which is a contagious disease and is so recognized under the laws of this Commonwealth, prevails among cattle in some of the States and Territories of the United States, and whereas animals infected with or exposed to said disease are likely to be brought upon the premises of the Butchers' Slaughtering and Melting Association at Brighton for slaughter,

Now, therefore, acting under and by virtue of the authority vested in me by the provisions of chapter 90 of the Revised Laws and chapter 608 of the Acts of 1912 and all acts in amendment thereof and addition thereto and all other authority me hereto enabling, I do hereby make the following order and regulation: —

The premises of the Butchers' Slaughtering and Melting Association at Brighton are hereby quarantined. Neat cattle shall be brought upon them for immediate slaughter only, between the date when this order is approved and the 1st of November, 1913. Cattle brought upon these premises shall not be removed alive, but shall be slaughtered.

This order shall be published by posting three or more copies upon the premises of the Butchers' Slaughtering and Melting Association at Brighton in the city of Boston.

FRED FREELAND WALKER,
Commissioner of Animal Industry.

Approved in Council June 4, 1913.

EDWARD F. HAMLIN,
Executive Secretary.

*Report of Cattle brought into State during the Year to Points outside of
 the Quarantine Stations.*

For dairy and breeding purposes, tested before shipment,	2,286
For dairy and breeding purposes, tested after arrival,	4,006
	6,292
Neat cattle on which no test was required, exclusive of cattle and calves for immediate slaughter,	1,263
The last item is made up as follows: —	
Returned from out-of-State pastures,	974
Calves under six months old,	115
Died before test could be made,	4
For temporary stay on exhibition or at auctions,	158
Remaining in State for brief periods only,	12
Cattle for immediate slaughter,	4,142
Calves for immediate slaughter,	4,527
	8,669
Total for all purposes,	16,224

Nearly all of the total number of animals given above were brought into the State on permits issued by the head of the department, only 715 head having been brought in without permits, which were reported to the department by railroad agents, local inspectors or others. Of these, 88 were tested before shipment, 6 were calves under six months old, 91 were slaughtered at once for beef or veal, 24 were kept in the State temporarily, 269 were returned from pasture, and the remainder, 237 head, were tested by agents of the department.

The following figures show the disposition of animals that were brought into the State to points outside of the quarantine stations at Brighton, Watertown and Somerville, which failed to pass a satisfactory tuberculin test:—

Condemned on first test,	51
Condemned on second test,	62
Condemned on third test,	2
Awaiting retest,	1
Released for slaughter, subject to inspection,	6

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Of the animals condemned as above, 2 are still awaiting slaughter; 10 were found on post-mortem examination to be free from disease, and either have been or will be paid for by the State; on 1 no report has been received; and 102 were found on post-mortem examination to be affected with tuberculosis. Of the 6 animals killed for beef after reacting, 2 were found diseased, and in 4 no lesions of tuberculosis were found.

There were 1,048 permits issued, 132 of which were not used.

Seventeen permits were issued allowing cattle to be brought into the State for the purpose of exhibition; 11 were issued for returning cattle from exhibition in other States; 8 were issued for pasturing herds in the State during the season; 4 were issued allowing cattle to be unloaded in transit through the State; and 7 were special permits to persons living near the border line of the State, allowing cattle to be kept in the State for brief periods only without test.

During the spring and early summer agents of the department examined and tagged 1,554 Massachusetts cattle which

were to be sent into New Hampshire and Vermont for pasture during the season. Some of these were returned in the fall on special permits, and many were brought to the quarantine station at Brighton, where they were identified and released by the agent in charge of that station.

Amendment to Order No. 5.

On October 29, the Governor and Executive Council approved of the following amendment to Department Order No. 5:—

SECTION 5. Any person importing or bringing into this Commonwealth any neat cattle shall immediately upon arrival of the same notify the local inspector of animals, and shall report in writing to the Department of Animal Industry, giving the number of cattle thus brought in, the place where they were procured, the point of arrival, and the destination within this Commonwealth.

For several years, at the request of the United States Department of Commerce and Labor, a report of the receipts of all live stock at the port of Boston has been sent to Washington each month. The report is made to show weekly receipts. The following table shows the receipts, by months, for the past year:—

Receipts of Live Stock at Boston for Twelve Months ending Nov. 30, 1913.

FOR MONTH OF —	Cattle.	Calves.	Sheep.	Swine.	Horses.
December,	13,855	10,029	51,613	140,174	2,031
January,	7,910	7,249	24,292	112,128	1,632
February,	8,390	8,243	24,894	112,911	1,640
March,	9,530	13,267	25,705	114,914	2,550
April,	7,780	13,546	28,056	85,917	2,408
May,	6,319	10,438	26,348	88,890	2,295
June,	10,900	13,706	44,158	109,022	2,513
July,	9,477	9,078	40,087	76,782	1,937
August,	12,303	11,091	57,363	87,808	2,079
September,	12,502	9,737	53,893	63,915	1,992
October,	15,310	11,562	49,953	74,487	2,311
November,	16,166	10,635	83,883	93,335	2,183
Totals,	130,442	128,581	507,745	1,160,263	25,571



Such owners of cattle as have voluntarily petitioned the department for the tuberculin testing of their herds by the State have been accorded this privilege where conditions seemed to justify it.

10 persons made voluntary requests to have their herds tested: —

10 herds were tested, comprising	180 cattle.
Released,	107
Permit to kill, paid for,	14
Permit to kill, no award,	59
	— 180 cattle.

HOG CHOLERA.

During the year there has been reported to this department 100 herds of hogs, containing approximately 2,758 animals suspected of being affected with hog cholera. Of this number, 804 have succumbed to the disease. The number of herds reported and the total number of animals, as well as the mortality, are somewhat in excess of last year.

This does not necessarily indicate that hog cholera is more prevalent than a year ago, but does mean that the farmers and hog raisers are becoming more acquainted with a disease to which they formerly gave little or no attention.

The records of the department show that the disease exists to a greater or less extent throughout the entire State. There are certain restricted localities where it is extremely prevalent and the mortality great, even among hogs kept in small herds under ordinary farm conditions. In other instances the outbreaks have developed in herds containing large numbers of animals fed on city swill or garbage.

The investigations of outbreaks of hog cholera that have been made by the agents of the department seem to show, beyond reasonable doubt, that the hogs fed on city swill contract the disease from it, while the farm-raised animals rarely contract it except through the medium of infectious material from sick hogs carried upon the shoes or clothing of persons who visit piggeries in which cholera exists and then go among their own animals. It is generally believed that the disease can be carried from sick to healthy herds by dogs, cats, crows, sparrows and by similar means. Hogs from an infected herd may transmit the infection from sick to healthy animals.

While hog cholera is known to exist in practically every section of the State, several supposed outbreaks that have been investigated by agents of the department have been found not to be cholera, but a sporadic outbreak of such diseases as pneumonia, intestinal parasitism or food poisoning, due to the feeding of fermented or decomposed food.

Contrary to popular belief the hog is particularly liable to suffer from exposure to unsanitary surroundings; consequently, the first essential to successful swine husbandry is a clean, dry, sanitary surrounding.

As mentioned in the report of last year, the department has already conducted some experimental work to determine the value of anti-hog-cholera serum in the prevention and cure of the disease. This experimental work has been continued on a larger scale and under a greater variety of conditions since that report was issued. At present there are some twelve herds, containing in all several hundred hogs, that are now under observation. Different methods of using serum as a preventive and curative agent have been employed in the treatment of these herds. While the work at this date does not warrant the drawing of definite conclusions, it indicates that serum, properly used, is of great assistance in combating this disease. It is of greatest value when employed as a preventive. The curative effects, when used in the treatment of an animal already suffering from cholera, seem to be very slight, even when used in large doses as recommended. The experience of those in the department who have used anti-hog-cholera serum shows conclusively that treatment must be administered early in the outbreak of the disease, before the infection has become spread throughout the herd. Where this method has been employed it has been found possible to completely arrest the spread of the disease. On the other hand, when the disease has become quite generally disseminated the mortality runs high, even though serum is administered in large amounts.

It has been the policy of the department to furnish the service of its agents in carrying out these experiments, on condition that the owners of the animals pay the actual cost of the serum used in the treatment. This work has been under the direct supervision of Dr. James B. Paige, who has made an exhaustive study of the disease and its prevention in Massachusetts.

MISCELLANEOUS DISEASES.

The Department of Animal Industry is called upon during the year to deal with other diseases of a contagious nature, in addition to rabies, glanders, bovine tuberculosis and hog cholera. Among them are actinomycosis, mange, symptomatic anthrax or blackleg, anthrax, Texas fever, and tuberculosis in other animals than cattle.

Twelve cases of actinomycosis have been reported; 10 of these animals were slaughtered, and 2 were found not to have this disease.

There has been a further decrease in the number of animals reported as suffering from mange, although this disease now occurs quite frequently in some localities. Twenty-eight places where mange was supposed to exist were reported, one of which was found to be free from it. At the remaining 27 places 257 head of cattle, 4 horses, 2 hogs and 1 dog were found to be affected.

The application of a mixture of engine oil, phenol, kerosene and sulphur has apparently proved most efficacious in treating this trouble, and has been recommended, with excellent results, to owners of diseased animals.

The protective inoculation of young cattle where symptomatic anthrax or blackleg has occurred has been continued where owners requested, and has been done under the direction of Dr. James B. Paige of the Amherst Agricultural College, with the assistance of his brother, Dr. Henry E. Paige, an agent of this department. Reports have been received from 97 owners, and 506 head of cattle have been inoculated. At two of the places reported the disease was found not to exist, and the animals were not inoculated.

Outbreaks of anthrax have been reported at 14 farms, at 3 of which it was found upon investigation not to have occurred; at the 11 remaining farms, 98 sheep, 8 horses and 29 head of cattle were inoculated.

In addition to the above diseases outbreaks have been reported from various sections of the State from time to time, which upon investigation have proven to be foot-rot, distemper, food poisoning, etc., diseases not recognized under the law as contagious.

BARN INSPECTION.

It is with especial satisfaction that I refer to this branch of the department work. One new appointment has been made to the force employed, for a portion of their time, on this class of work. Charles J. Dailey of Lexington, the new appointee, gives every promise of rendering service equal in quality to that high type of efficiency displayed by his associates whose names were given in last year's report. Mr. F. S. Bancroft, who is employed as an assistant at the quarantine station, has also been assigned a section of the State in which he has carried on the work of district agent during the past year.

Greater effort has been directed this year toward cleaning up certain places under observation rather than extending effort over too much territory, with the result that the figures following show, apparently, less extensive improvement than might have been hoped for, but that improvement is of such a high order as to be very satisfactory. A new policy is to be adopted the coming year which I am sure will put the whole work on a firmer basis and produce still more beneficial results.

